Operational Aeromedical Problems Course May 1999

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USAARL Update

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USAARL 1998-99 Overview

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- Science Program
- Organizational Highlights
- Future Directions

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Aircrew Performance Division

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- Spatial Disorientation Training
- Fatigue Countermeasures
- Cockpit Crew Coordination
- Helmet Mounted Displays

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Spatial Disorientation Training

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- Class A mishap scenarios
- Cost Effective Training AD/RC

Distinguished Visitors

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GEN Crouch, VCSA

- GEN Crouch, VCSA
- GEN Abrams, DCG, TRADOC
- LTG Petrosky, CG USAAVNC
- MG Hill, 25th ID
- MG Riley, 30th Inf (Mech)
- MG Stewart, 28th Inf Div
- MG McNeil, 82d Abn Div
- MG Burns, 1st Cav
- MG Kinley, 62d ID
- MG Clark, 101st
- MG Porter, 38th ID
- MG McGrueder, 10th Mountain Div
- MG Childers, 29th ID

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- MG Wallace, 4th ID
- MG Zysk, 40th ID
- MG Ellis, 1st Armored Div
- MG Ernst, Infantry Center
- MG Jones, CG, USAAVNC
- MG Grange, 1st ID
- MG Hannula, 34th ID
- MG Thomas, Military Intel Center
- BG Krase, 35th Inf Div (Mech)
- BG Halverson, 49th ID
- BG Harper, Trans School
- BG Burke, CG, US Army Safety Center

Fatigue Countermeasures

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- Dexedrine 64 hour study
- Submaximal exercise
- Modafinil
- “Asleep at the Throttle” Pamphlet

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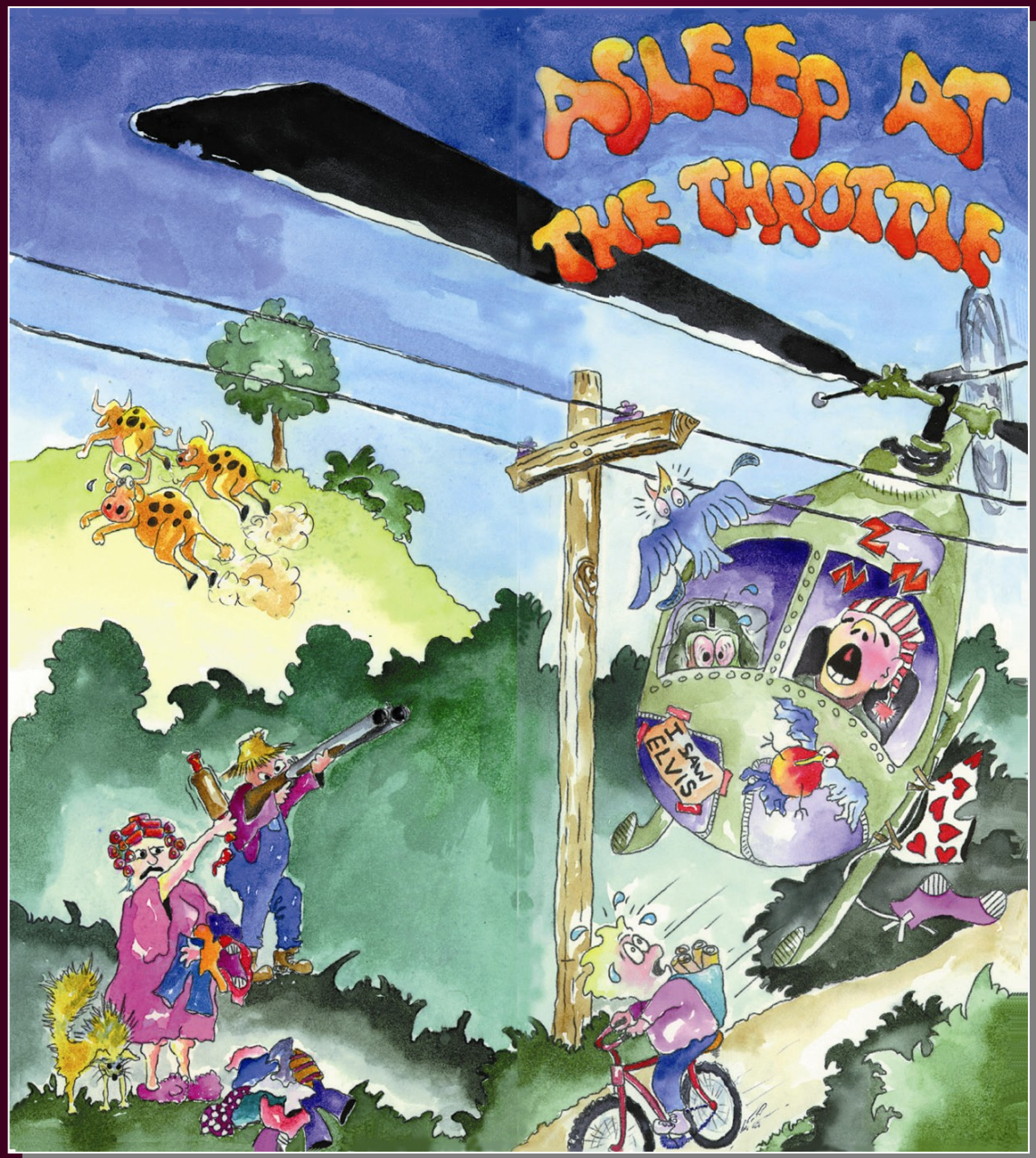

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Cockpit Crew Coordination

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- 160th Special Operations Aviation Regiment “Night Stalkers”
- CIRCLE validation from video library

Helmet Mounted Displays

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- Design Issues book publication
- Flat panel display Figures of Merit

Aircrew Protection Division

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- ALSERP Deployments
- Cockpit Airbag development
- Women’s Studies
  - Head supported mass
  - Hair effects
- Heat stress studies

LSERP Deployments

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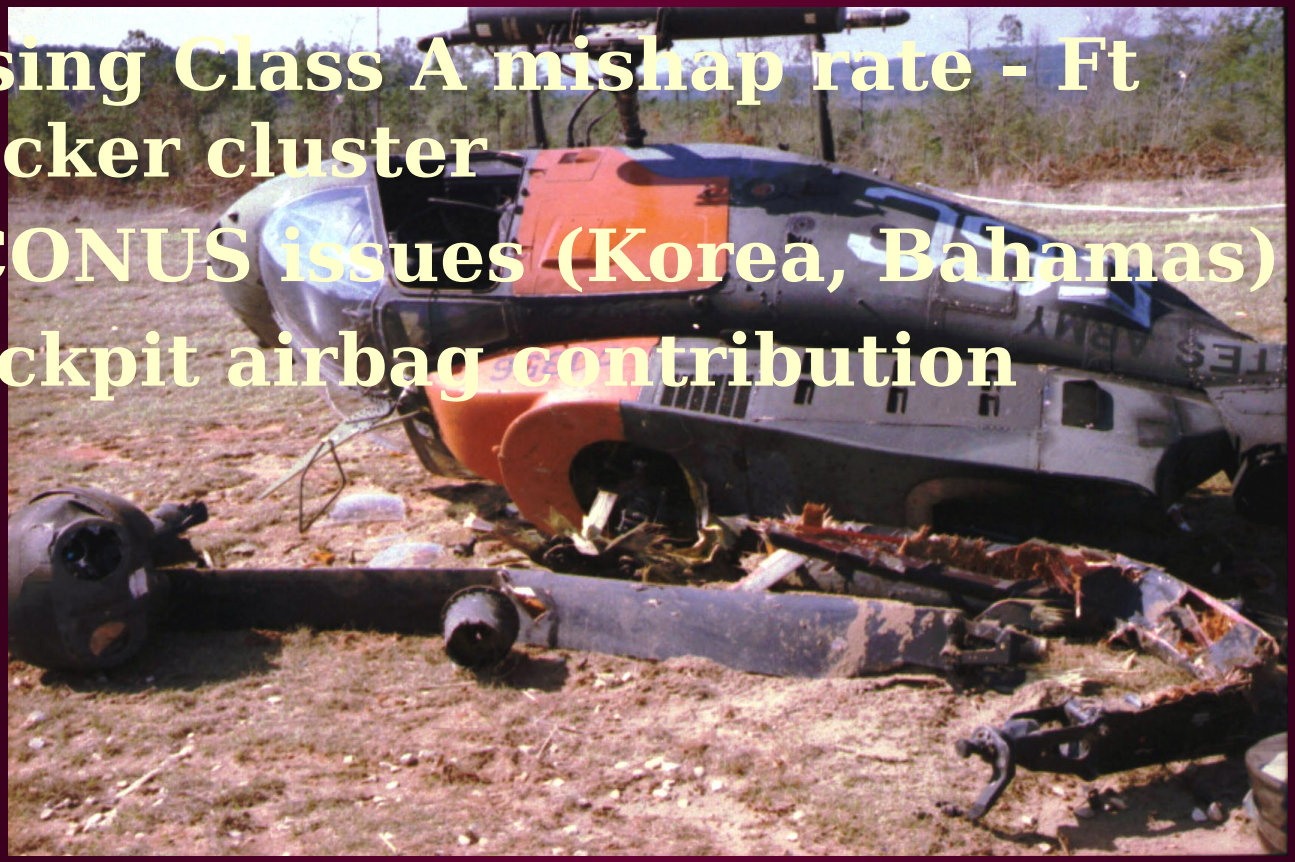
- Rising Class A mishap rate - Ft Rucker cluster
- OCONUS issues (Korea, Bahamas)
- Cockpit airbag contribution



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Cockpit Airbags

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- UH-60 Blackhawk and RAH-66 Comanche
- Flight control interference
- Side airbag risk

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Air Bag Protection

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Women's Studies

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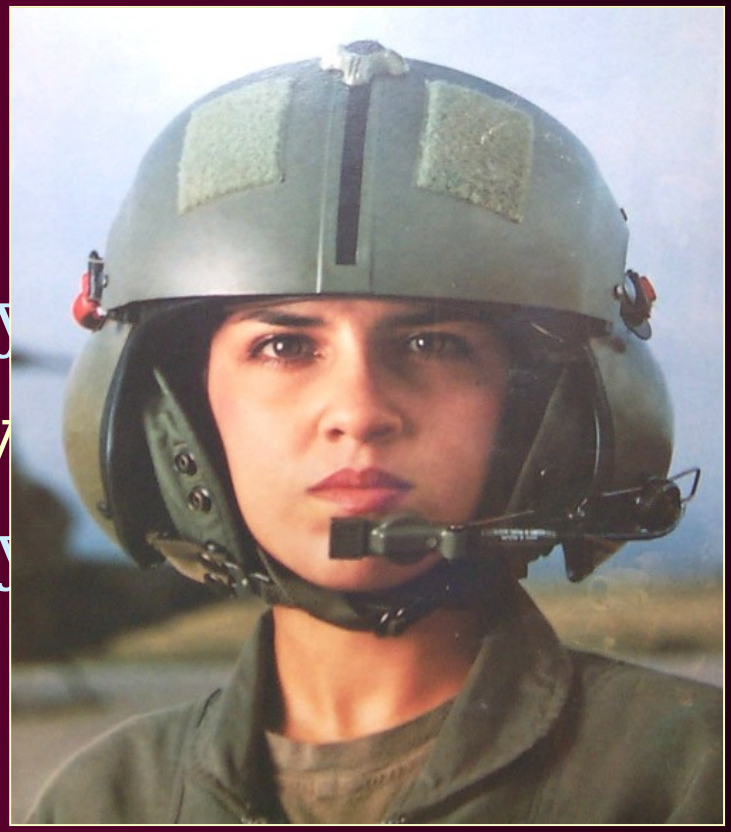
- Head supported mass
  - Increased neck fatigability
- Amelia hair effects study
  - Decreased helmet stability
  - Diminished acoustic protection



Heat Stress Studies

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- Microclimate vest Air Warrior program
- MOPP ensembles 160th SOAR
- Collaboration with USARIEM

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1998 Output

Primary Investigators	13
Technical Reports	37
Technical Memos	46
Presentations	50
Journal Publications	12
Consultations	177
Lectures	29

Primary Investigators

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Organizational Highlights

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- C-12 deletion
- Biochem laboratory closure
- Tenant for vivarium space
- MOU with USAAMC for medical monitors
- UH-60 upgrade for MEDEVAC testing
- Primary review member for Aviation DCD
- Public relations video

Organizational Highlights

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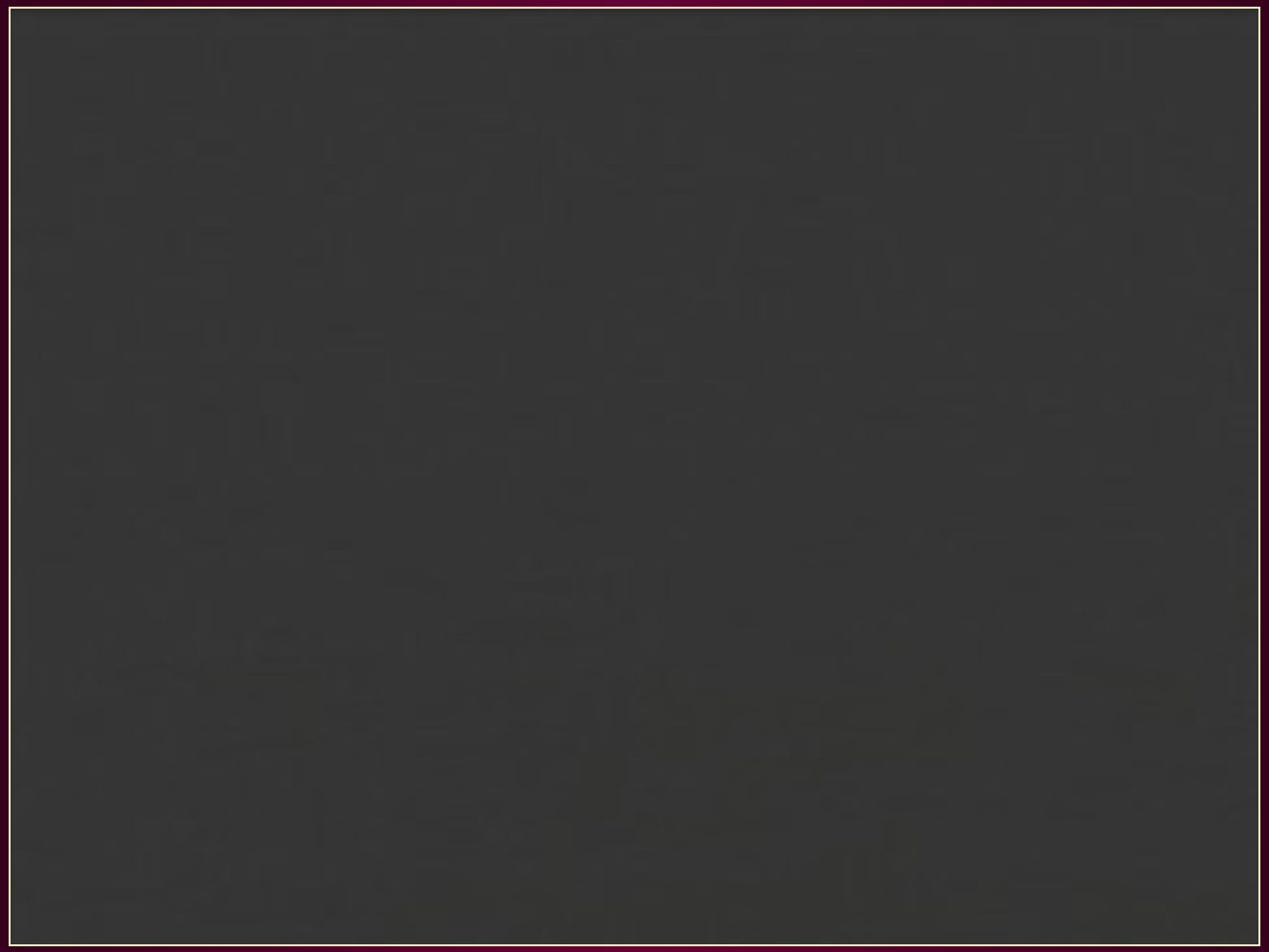

Future Directions

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- Integrated product team Warfighter Physiological Status Monitor (EEG telemetry)

Telemetry

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Future Directions

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- Integrated product team WPSM (EEG telemetry)
- Cockpit Airbags
- Head supported mass tolerance standards
- Crew coordination performance assessment

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Conclusion

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- USAARL - Anticipating Air Warrior Needs
- Change of Command 11 June
  - LTC(P) John Powell, MFS

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Thank You

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